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## NOTICE OF ALLOWANCE AND FEE(S) DUE

7590

09/26/2008

Wells St. John P.S.  
601 W. First Ave., Suite 1300  
Spokane, WA 99201

EXAMINER

SMYTH, ANDREW P

ART UNIT

PAPER NUMBER

2881

DATE MAILED: 09/26/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,039	10/20/2005	Dennis Barket JR.	GR61-043	1055

TITLE OF INVENTION: INSTRUMENTATION, ARTICLES OF MANUFACTURE, AND ANALYSIS METHODS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$720	\$300	\$0	\$1020	12/26/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to:** **Mail** **Mail Stop ISSUE FEE**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
**or Fax** **(571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

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## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

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nonprovisional	YES	\$720	\$300	\$0	\$1020	12/26/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
SMYTH, ANDREW P	2881	250-288000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_  
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_  
3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_  
Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 446 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 446 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

**Notice of Allowability****Application No.**

10/554,039

**Applicant(s)**

BARKET ET AL.

**Examiner**

ANDREW SMYTH

**Art Unit**

2881

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 06/24/2008.
2. ☒ The allowed claim(s) is/are 1-3,6,7,10-15,17-26 and 36-50.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of the:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  
**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date See Continuation Sheet
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

/Jack I. Berman/  
Primary Examiner, Art Unit 2881

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 01/20/2006; 10/10/2006; 10/03/2007.

**DETAILED ACTION**

***Response to Amendment***

1. Claims 1, 6, 7, 10, 17-20, 22, 36, and 44 amended.
2. Claims 4-5, 8-9, 16, 27-35, and 51 canceled.

***Allowable Subject Matter***

1. Claims 1-3, 6-7, 10-15, 17-26, and 36-50 are allowed.
2. The configuration was not found in a prior art search. The following is a listing/  
statement of reasons for the indication of allowable subject matter.

**The search failed to show or suggest the prior use of:**

The configuration/ combination of elements of independent claim 1 An  
instrument comprising:

an ionization source configured to apply different ionization energies to a sample to  
provide different sample characteristics; and

processing circuitry configured to process the different sample characteristics to identify  
the sample;

**wherein the processing circuitry is configured to acquire at least two data sets of  
the different sample characteristics, one of the two data sets of the different  
sample characteristics comprising a first sample characteristic associated with a  
first ionization energy and another of the two data sets of the different sample  
characteristics comprising a second sample characteristic associated with a  
second ionization energy; and**

**wherein the processing circuitry is further configured to access at least two data sets of reference sample characteristics, one of the data sets of the reference sample characteristics comprising a third reference sample characteristic associated with the first ionization energy and another of the two data sets of the reference sample characteristics comprising a fourth reference sample characteristic associated with the second ionization energy.**

The configuration/ combination of elements of independent claim 7 Amass spectrometer comprising:

an ionization component configured to receive a sample and provide a first ionization energy to the sample to form a first ionized analyte and provide a second ionization energy to the sample to form a second ionized analyte, wherein the first and second energies are not equal;

a detection component configured to detect the first and second ionized analytes formed by the ionization component; a4q-el-

processing circuitry configured to monitor the detection component and associate detection of the first ionized analytes with a first sample characteristic and associate detection of the second ionized analytes with a second sample characteristic, wherein the processing circuitry is further configured to associate both the first sample characteristic with the first ionization energy, and the second sample characteristic with the second ionization energy to identify a ~~sample~~-sample;

**wherein the sample characteristics comprise mass spectra and the processing circuitry is further configured to prepare a sample data set comprising first and**

**second data sets, the first data set comprising the first mass spectra associated with the first ionization energy and the second data set comprising second mass spectra associated with the second ionization energy; and further comprising storage circuitry comprising media configured to store digital data, wherein the media comprises reference data comprising third and fourth data sets, the third data set comprising a third mass spectra and the first ionization energy and the fourth data set comprising a fourth mass spectra and the second ionization energy, wherein the third mass spectra was acquired at the first ionization energy and the fourth mass spectra was acquired at the second ionization energy.**

The configuration/ combination of elements of independent claim 20 A mass spectrometer comprising:

**an ionization component configured to receive a sample and provide a first ionization energy to the sample to form a first ionized analyte and provide a second ionization energy to the sample to form a second ionized analyte, wherein the first and second energies are not equal;**  
**a detection component configured to detect the first and second ionized analytes formed by the ionization component;**  
**processing circuitry configured to monitor the detection component and associate detection of the first ionized analytes with a first sample characteristic and associate detection of the second ionized analytes with a second sample characteristic, wherein the processing circuitry is further configured to associate**



**both the first sample characteristic with the first ionization energy, and the second sample characteristic with the second ionization energy to identify a sample;**

**a mass separation component configured to receive the first and second ionized analytes from the ionization component and provide a first separation waveform to separate a first mass-to-charge ratio range of ionized analytes and provide a second separation waveform to separate a second mass-to-charge ratio range of ionized analytes; and**

**wherein the processing circuitry is further configured to associate both the first sample characteristic with the first mass separation waveform, and the second sample characteristic with the second mass separation waveform; and, storage circuitry comprising media configured to store the sample data set and a reference data set, the reference data set comprising third and fourth data sets, the third data set comprising a third sample characteristic of a reference sample associated with the first ionization energy and mass separation waveforms and the fourth data set comprising a fourth sample characteristic of the reference sample associated with the second ionization energy and mass separation waveforms, wherein the third sample characteristic was acquired utilizing the first ionization energy and mass separation waveforms and the fourth sample characteristic was acquired utilizing the second ionization energy and mass separation waveforms.**

The configuration/ combination of elements of independent claim 22 Amass spectrometer comprising:

**a first analyte modification component configured to receive a sample and provide both a first ionization energy to the sample to form a first group of ionized analytes, and provide a second ionization energy to the sample to form a second group of ionized analytes;**

**a first mass separation component configured to receive the first and second groups of ionized analytes and provide both a first separation waveform to separate a first mass-to-charge ratio range of the first group of ionized analytes, and provide a second separation waveform to separate a second mass-to-charge ratio range of the second group of ionized analytes;**

**a second analyte modification component configured to receive the first and second mass-to-charge ratio ranges of ionized analytes and provide both a third energy to the first and second ranges of ionized analytes to form a third group of ionized analytes, and provide a fourth energy to the ranges to form a fourth group of ionized analytes;**

**a second mass separation component configured to receive the third and fourth groups of ionized analytes and provide both a third separation waveform to separate a third mass-to-charge ratio range of the third group of ionized analytes and provide a fourth separation waveform to separate a fourth mass-to-charge ratio range of the fourth group of ionized analytes, wherein at least one of the first and second or third and fourth ionization energies, or the first and second or**

**third and fourth separation waveforms are not equal;**  
**a detection component configured to detect the ionized analytes of the third and fourth ranges of ionized analytes received from the second mass separation component; and**  
**processing circuitry configured to monitor the detection component and associate detection of ionized analytes of the third range with a first sample characteristic and associate detection of ionized analytes of the fourth range with a second sample characteristic, wherein the processing circuitry is further configured to correlate both the first sample characteristic with one or more of the first ionization energy, the first mass separation waveform, the third energy and the third mass separation waveform, and the second sample characteristic with one or more of the second ionization energy, the second mass separation waveform, fourth ionization energy, and the fourth separation waveform.**

The configuration/ combination of elements of independent claim 36 A sample analysis method comprising: providing a sample; generating a sample data set using the sample, the sample data set comprising first and second data sets, wherein each of the first and second data sets comprises at least one of an analytical parameter value and a sample characteristic acquired using the analytical parameter value, wherein the analytical parameter value of the first set is different than the analytical parameter value of the second set  
using the first and the second data sets, identifying the ~~sample~~-sample;  
**wherein the sample characteristic comprises at least mass spectra and the**

**identifying the sample further comprises:**

**providing a reference data set comprising third and fourth data sets, the third data set comprising the analytical parameter value of the first set and mass spectra of a reference sample ,generated using the analytical parameter value of the first set, and the fourth data set comprising the analytical parameter value of the second set and mass spectra of the reference sample ,generated using the analytical parameter value of the second set; and comparing the sample and reference data sets, the comparing comprising applying an algorithm to both the mass spectra of the first data set and the third data set, and the mass spectra of the second data set and the fourth data set, wherein the algorithm is configured to compare mass spectra and provide a first match value of the mass spectra of the first data set and the mass spectra of the third data set and a second match value of the mass spectra of the second data set and the mass spectra of the fourth data set.**

3. Dependent claims 2-3 and 6 are allowable due to dependency upon allowable independent claim 1.
4. Dependent claims 10-15 are allowable due to dependency upon allowable independent claim 7.
5. Dependent claims 17-19 and 21 are allowable due to dependency upon allowable independent claim 20.

6. Dependent claims 23-26 are allowable due to dependency upon allowable independent claim 22.
7. Dependent claims 37-50 are allowable due to dependency upon allowable independent claim 36.

### ***Conclusion***

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pertinent prior art is closely related art that individually or in combination could be considered grounds for rejection. See references cited for a listing of the pertinent prior art found and the prior art found.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Smyth whose telephone number is 571-270-1746. The examiner can normally be reached on 7:30AM - 5:00PM; Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jack I. Berman/

Primary Examiner, Art Unit 2881

/A. S./  
Examiner, Art Unit 2881